United States Department of Agriculture
Natural Resources Conservation Service

Water Management Activity – Reduction of Evaporative Losses

Reduction of Evaporative Losses
The reduction of evaporative losses is an integral part of an irrigation water management plan. The purpose of this enhancement is to conserve irrigation water by reducing evaporative loss. The methods to accomplish this include maintaining a Soil Conditioning Index of greater than 1.0, use of soil surface evaporative barriers (straw, compost or fabric barriers) in crop rows, timing of irrigation applications to avoid peak evaporative conditions and installation of windbreaks or barriers to improve water distribution and reduce drift.

Benefits
These activities used in conjunction with IWM can conserve irrigation water by 5%-20% by reducing the effects of wind and high air temperatures on evaporation of irrigation water. These activities increase the effective amount of soil water available for crop use and can reduce the duration and frequency of irrigation sets.

Criteria for Reduction of Evaporative Losses Enhancement Activity

Level 1
Maintenance of SCI greater than 1.0 or a soil surface evaporative barrier is utilized.

Level 2
Level 1 is achieved and one of the following activities is added to the management of the operation:

- Irrigation timing to avoid peak evaporative conditions
- Windbreaks or barriers are utilized to improve water distributions and reduce drift

Reference:

Natural Resources Conservation Service. 2002. National Agronomy Manual 190-V. USDA-NRCS. Washington, D.C.

Natural Resources Conservation Service. 1991. National Engineering Handbook (NEH-15), 2nd Edition, Chapter 15, Irrigation 210-VI. USDA-NRCS. Washington, D.C.

Natural Resources Conservation Service. National Engineering Handbook, Part 652, Irrigation Guide, 1996.

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